



## Complete Summary

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### TITLE

Hospital-based inpatient psychiatric services: the total number of hours that all patients admitted to a hospital-based inpatient psychiatric setting were maintained in physical restraint.

### SOURCE(S)

Specifications manual for Joint Commission National Quality Core Measures [Version 2010A2]. Oakbrook Terrace (IL): The Joint Commission; 2010 Jan. 335 p.

## Measure Domain

### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Does not apply to this measure

## Brief Abstract

### DESCRIPTION

This measure is used to assess the total number of hours that all patients admitted to a hospital-based inpatient psychiatric setting were maintained in physical restraint.

### RATIONALE

Mental health providers that value and respect an individual's autonomy, independence and safety seek to avoid the use of dangerous or restrictive interventions at all times. The use of seclusion and restraint is limited to situations deemed to meet the threshold of imminent danger and when restraint and seclusion are used; such use is rigorously monitored and analyzed to prevent future use. Providers also seek to prevent violence or aggression from occurring in

their treatment environments by focusing their attention on prevention activities that have a growing evidence base.

## **PRIMARY CLINICAL COMPONENT**

Psychiatric inpatient; physical restraint

## **DENOMINATOR DESCRIPTION**

Number of psychiatric inpatient days (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

## **NUMERATOR DESCRIPTION**

The total number of hours that all psychiatric inpatients were maintained in physical restraint (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

## **Evidence Supporting the Measure**

### **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## **Evidence Supporting Need for the Measure**

### **NEED FOR THE MEASURE**

Use of this measure to improve performance

### **EVIDENCE SUPPORTING NEED FOR THE MEASURE**

Donat DC. An analysis of successful efforts to reduce the use of seclusion and restraint at a public psychiatric hospital. *Psychiatr Serv* 2003 Aug;54(8):1119-23. [PubMed](#)

Fisher WA. Elements of successful restraint and seclusion reduction programs and their application in a large, urban, state psychiatric hospital. *J Psychiatr Pract* 2003 Jan;9(1):7-15. [PubMed](#)

Huckshorn KA. Reducing seclusion restraint in mental health use settings: core strategies for prevention. *J Psychosoc Nurs Ment Health Serv* 2004 Sep;42(9):22-33. [52 references] [PubMed](#)

Mohr WK, Anderson JA. Faulty assumptions associated with the use of restraints with children. *J Child Adolesc Psychiatr Nurs* 2001 Jul-Sep;14(3):141-51. [PubMed](#)

Special section on seclusion and restraint. Psychiatr Serv 2005 Sep;56(9):1104-42.

Success stories and ideas for reducing restraint/seclusion. A compendium of strategies created by the APA, the APNA, the NAPHS and the AHA. Washington (DC): National Association of Psychiatric Health Systems (NAPHS); 2003.

### State of Use of the Measure

#### STATE OF USE

Current routine use

#### CURRENT USE

Internal quality improvement

### Application of Measure in its Current Use

#### CARE SETTING

Hospitals

#### PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

#### LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

#### TARGET POPULATION AGE

All patients age one year and older

#### TARGET POPULATION GENDER

Either male or female

#### STRATIFICATION BY VULNERABLE POPULATIONS

Children

### Characteristics of the Primary Clinical Component

#### INCIDENCE/PREVALENCE

Mental disorders are common in the United States and internationally. An estimated 26.2 percent of Americans ages 18 and older — about one in four adults — suffer from a diagnosable mental disorder in a given year. When applied to the 2004 U.S. Census residential population estimate for ages 18 and older, this figure translates to 57.7 million people.

## **EVIDENCE FOR INCIDENCE/PREVALENCE**

Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 2005 Jun;62(6):617-27. [PubMed](#)

U.S. Census Bureau population estimates by demographic characteristics. Table 2: annual estimates of the population by selected age groups and sex for the United States: April 1, 2000 to July 1, 2004 (NC-EST2004-02). Population Division, U.S. Census Bureau; 2005 Jun 9.

## **ASSOCIATION WITH VULNERABLE POPULATIONS**

Unlike most disabling physical diseases, mental illness begins very early in life. Half of all lifetime cases begin by age 14; three quarters have begun by age 24. Thus, mental disorders are really the chronic diseases of the young. For example, anxiety disorders often begin in late childhood, mood disorders in late adolescence, and substance abuse in the early 20's. Unlike heart disease or most cancers, young people with mental disorders suffer disability when they are in the prime of life, when they would normally be the most productive.

## **EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS**

National Institute of Mental Health. Mental illness exacts heavy toll, beginning in youth. National Institutes of Health (NIH); 2005.

## **BURDEN OF ILLNESS**

Even though mental disorders are widespread in the population, the main burden of illness is concentrated in a much smaller proportion — about 6 percent, or 1 in 17 — who suffer from a serious mental illness. In addition, mental disorders are the leading cause of disability in the U.S. and Canada for ages 15 to 44. Many people suffer from more than one mental disorder at a given time. Nearly half (45 percent) of those with any mental disorder meet criteria for 2 or more disorders, with severity strongly related to comorbidity.

## **EVIDENCE FOR BURDEN OF ILLNESS**

Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 2005 Jun;62(6):617-27. [PubMed](#)

National Institute of Mental Disorders (NIMD). The numbers count: mental disorders in America. [internet]. Bethesda (MD): National Institute of Mental Health (NIMH); 2008 Apr [accessed 2008 Apr 29].

World Health Organization. The World Health report 2004: changing history, annex table 3: burden of disease in DALYs by cause, sex, and mortality stratum in WHO regions, estimates for 2002. Geneva: WHO; 2004.

## UTILIZATION

Unspecified

## COSTS

Major mental disorders cost the nation at least \$193 billion annually in lost earnings alone, according to a new study funded by the National Institutes of Health's National Institute of Mental Health (NIMH). The study was published online ahead of print May 7, 2008 in the *American Journal of Psychiatry*.

"Lost earning potential, costs associated with treating coexisting conditions, Social Security payments, homelessness and incarceration are just some of the indirect costs associated with mental illnesses that have been difficult to quantify," said NIMH Director Thomas R. Insel, M.D. "This study shows us that just one source of these indirect costs is staggeringly high."

Direct costs associated with mental disorders like medication, clinic visits, and hospitalization are relatively easy to quantify, but they reveal only a small portion of the economic burden these illnesses place on society. Indirect costs like lost earnings likely account for enormous expenses, but they are very difficult to define and estimate.

## EVIDENCE FOR COSTS

Kessler RC, Heeringa S, Lakoma MD, Petukhova M, Rupp AE, Schoenbaum M, Wang PS, Zaslavsky AM. Individual and societal effects of mental disorders on earnings in the United States: results from the national comorbidity survey replication. *Am J Psychiatry* 2008 Jun;165(6):703-11. [PubMed](#)

## Institute of Medicine National Healthcare Quality Report Categories

### IOM CARE NEED

Getting Better

### IOM DOMAIN

Safety

## Data Collection for the Measure

### CASE FINDING

Users of care only

**DESCRIPTION OF CASE FINDING**

Inpatients discharged with a psychiatric diagnosis

**DENOMINATOR SAMPLING FRAME**

Patients associated with provider

**DENOMINATOR INCLUSIONS/EXCLUSIONS****Inclusions**

All psychiatric inpatient days

**Exclusions**

Total leave days

**RELATIONSHIP OF DENOMINATOR TO NUMERATOR**

All cases in the denominator are equally eligible to appear in the numerator

**DENOMINATOR (INDEX) EVENT**

Clinical Condition  
Institutionalization

**DENOMINATOR TIME WINDOW**

Time window brackets index event

**NUMERATOR INCLUSIONS/EXCLUSIONS****Inclusions**

The total number of hours that all psychiatric inpatients were maintained in physical restraint

Include patients for whom at least one physical restraint event is reported during the month

**Exclusions**

None

**MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

**NUMERATOR TIME WINDOW**

Institutionalization

#### **DATA SOURCE**

Administrative data  
Medical record

#### **LEVEL OF DETERMINATION OF QUALITY**

Individual Case

#### **PRE-EXISTING INSTRUMENT USED**

Unspecified

### **Computation of the Measure**

#### **SCORING**

Ratio

#### **INTERPRETATION OF SCORE**

Better quality is associated with a lower score

#### **ALLOWANCE FOR PATIENT FACTORS**

Analysis by subgroup (stratification on patient factors, geographic factors, etc.)

#### **DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS**

Allowance for patient age is made via stratification of results:

- Overall rate
- Children age 1-12 years
- Adolescent age 13-17 years
- Adult age 18-64 years
- Older adult age greater than or equal to 65 years

#### **STANDARD OF COMPARISON**

Internal time comparison

### **Evaluation of Measure Properties**

#### **EXTENT OF MEASURE TESTING**

Alpha testing was conducted during May and June 2006 at approximately 40 volunteer test sites to assess feasibility and data collection effort. A total of five

measures were recommended by the Technical Advisory Panel (TAP) to comprise the final test set addressing the domains of Assessment, Patient Safety and Continuity/Transitions of Care.

The Specification Manual for National Hospital Inpatient Quality Measures Hospital-Based Inpatient Psychiatric Services Test Set was finalized by September 2006. A call for pilot test sites was placed in late 2006 to recruit volunteer hospitals to collect and report on the test measures. A total of 196 hospitals volunteered to participate in the Hospital Based Inpatient Psychiatric Services (HBIPS) pilot test. Hospitals opting to participate in the pilot test were defined as project pilot test sites and were allowed to utilize the test HBIPS measures to satisfy their ORYX measurement reporting requirement. Data collection for the test set began with January 1, 2007 discharges and continued throughout December 31, 2007.

Twenty-one listed performance measurement systems agreed to support the HBIPS pilot test. Joint Commission staff defined and developed a database structure for electronic receipt of measure data and a verification process was implemented to assure that measures were embedded into the measurement system's technical infrastructures and into their data collection tools in accord with Joint Commission specifications. Joint Commission staff also verified data collection tools and provided education regarding the test performance measure set to performance measurement systems vendors, which provided education and ongoing support to their confirmed test sites.

During the first quarter of the pilot test, a subset of 39 hospitals was randomly selected to collect and transmit monthly hospital clinical data (HCD) to help assess data quality and data reliability. The data quality study continued with data collection and transmission for the 12 months of 2007. Feedback on data quality was provided to each performance measurement systems vendor submitting HCD.

The final phase of testing consisted of site visits to a sample of participating pilot hospitals to assess the reliability of data abstracted and reported by those hospitals. A data collection tool was developed to facilitate the reabstraction of selected medical records and assessment of the reliability of the data elements. Reliability test site visits were conducted by Joint Commission staff at a subset of 18 randomly-selected pilot hospitals. Selection of the test sites was based on multiple characteristics; including hospital demographics, populations served, bed size and type of facility.

All of the HBIPS measures have undergone a rigorous process of public comment, alpha testing and broad-scale pilot testing and are recognized by the field as important indicators of hospital-based inpatient psychiatric care. As a final step, the HBIPS measure set has been submitted to the National Quality Forum (NQF) for consideration and 4 measures have received endorsement.

## **EVIDENCE FOR RELIABILITY/VALIDITY TESTING**

Domzalski K. (Joint Commission). Personal communication. 2010 Feb 12. 3 p.



## Identifying Information

### ORIGINAL TITLE

Hours of physical restraint use.

### MEASURE COLLECTION

[National Quality Core Measures](#)

### MEASURE SET NAME

[Hospital-Based Inpatient Psychiatric Services](#)

### DEVELOPER

Joint Commission, The

### FUNDING SOURCE(S)

All external funding for measure development has been received and used in full compliance with The Joint Commission's Corporate Sponsorship policies, which are available upon written request to The Joint Commission.

### COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

The composition of the group that developed the measure is available at:  
<http://www.jointcommission.org/NR/rdonlyres/656011F6-F6E7-4BC8-A82D-E436EDB2F01C/0/TAPMembersListforWeb6108.pdf>.

### FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Joint Commission's Conflict of Interest policies, copies of which are available upon written request to The Joint Commission.

### ADAPTATION

Measure was not adapted from another source.

### RELEASE DATE

2008 Jun

### REVISION DATE

2010 Jan

## MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: Joint Commission. Specifications manual for national hospital inpatient quality measures: hospital-based inpatient psychiatric services core measure set. Version 2.1a. Oakbrook Terrace (IL): Joint Commission; 2009 Feb. various p.

## SOURCE(S)

Specifications manual for Joint Commission National Quality Core Measures [Version 2010A2]. Oakbrook Terrace (IL): The Joint Commission; 2010 Jan. 335 p.

## MEASURE AVAILABILITY

The individual measure, "Hours of Physical Restraint Use," is published in "Specifications Manual for Joint Commission National Quality Core Measures [Version 2010A2]." This document is available from the [The Joint Commission Web site](#).

## NQMC STATUS

This NQMC summary was completed by The Joint Commission on May 30, 2008 and reviewed accordingly by ECRI Institute on July 7, 2008. This NQMC summary was updated by ECRI Institute on February 24, 2009. The information was verified by the measure developer on April 27, 2009. This NQMC summary was completed by The Joint Commission on August 27, 2009 and reviewed accordingly by ECRI Institute on February 5, 2010.

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